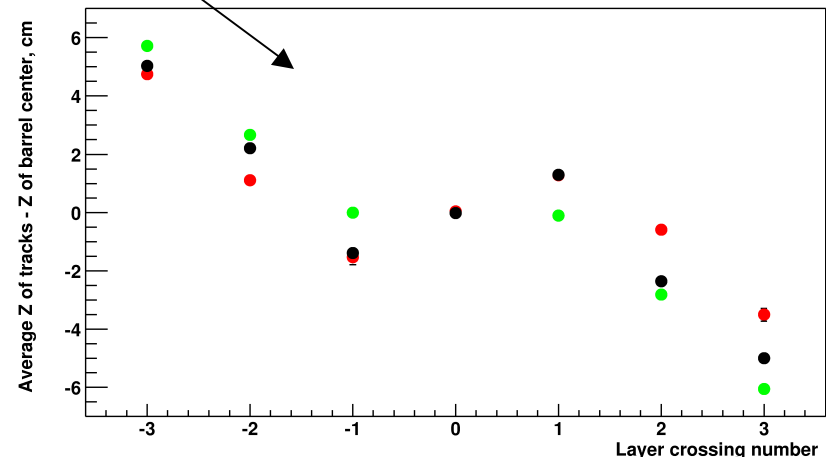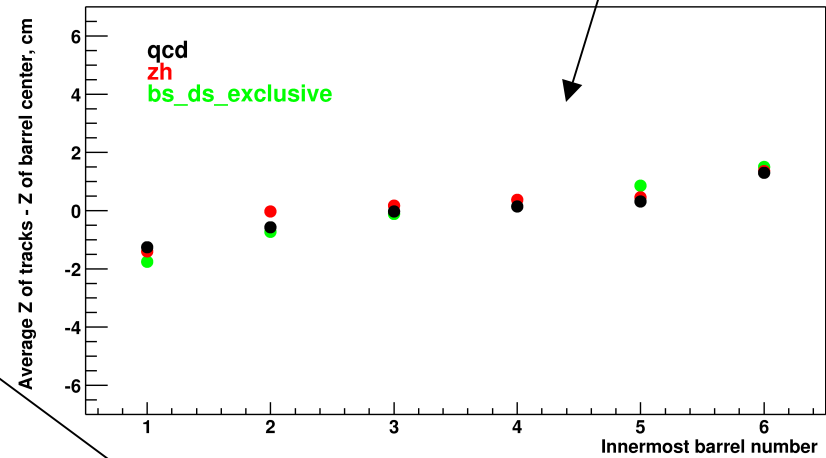# Beam Tilt & TFC: Which z value for correction?

1. **Standing plan**: correct using **barrel of innermost hit**
2. Alternate: also use barrel-crossing pattern

Compare means of
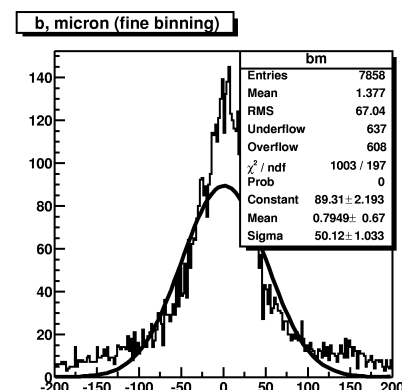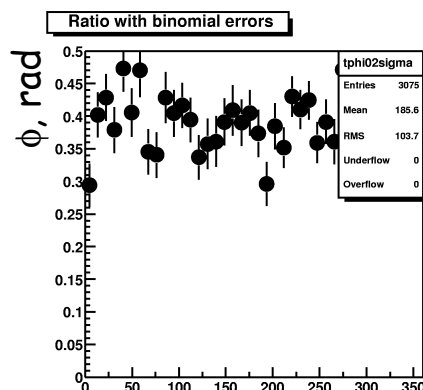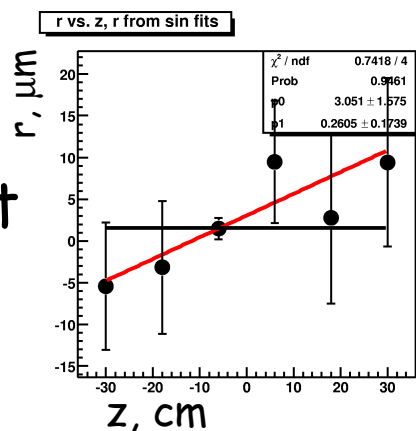
δz = track – barrel center

for both 1 and 2.

JDH, ST[1
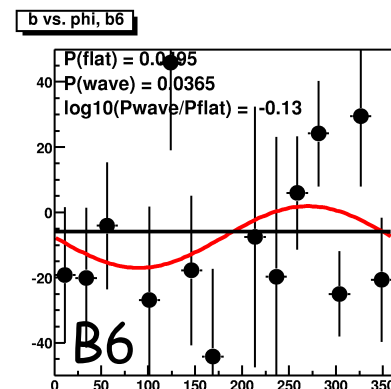
ZH->ννbb

no beam tilt

6 for barrels

3 summary
no tilt, expect
r =0
φ = random
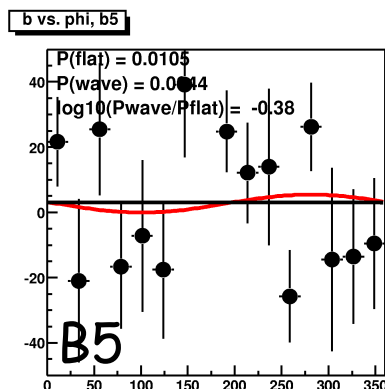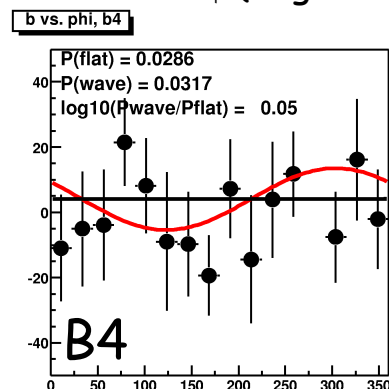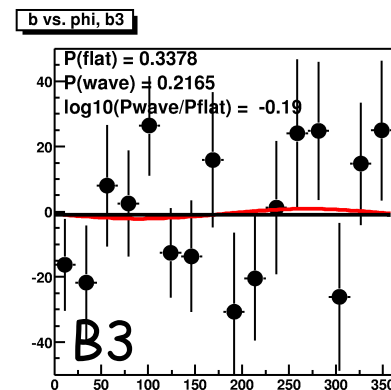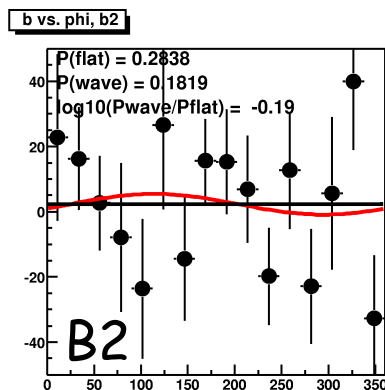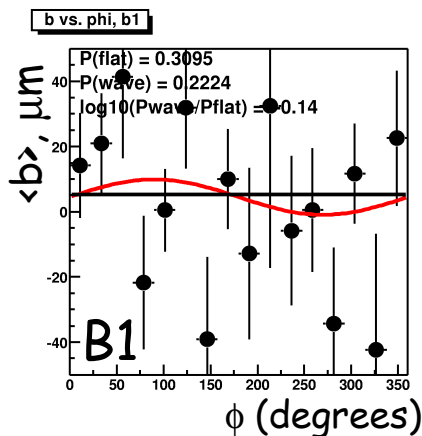
Tilt sample

. x, y=3 mm/cm
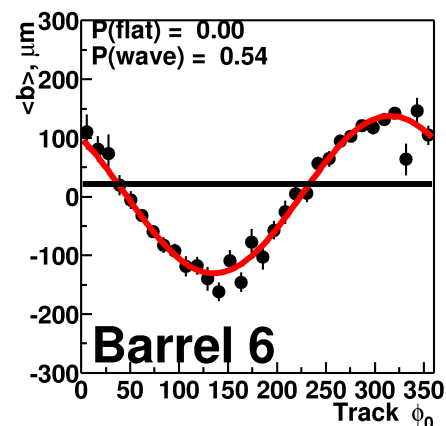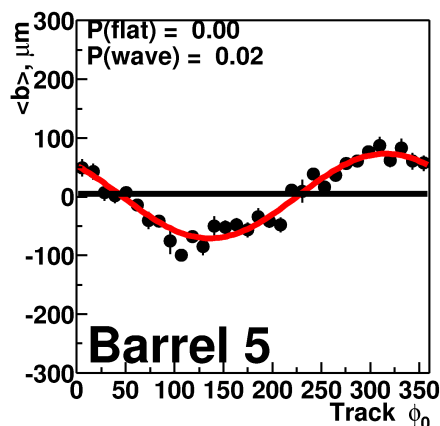
so expect
m_r=4.24
mm/cm

<u>Tilt sample, again</u>

after applying
  barrel correction

expect

  $m_r = 0$ mm/cm

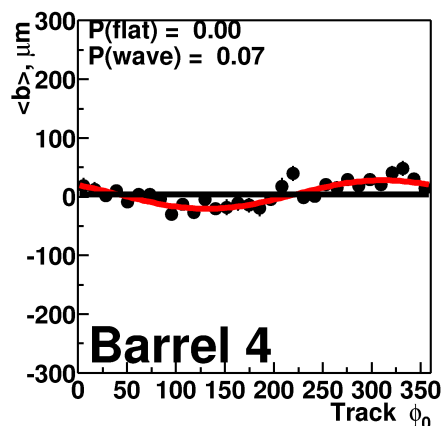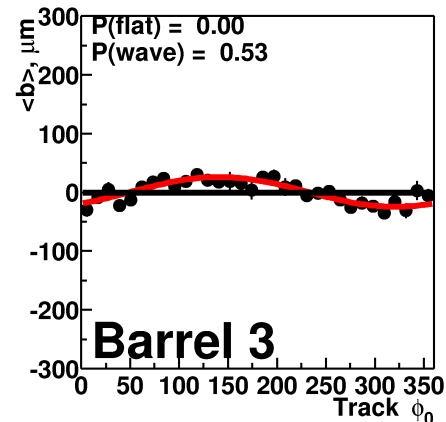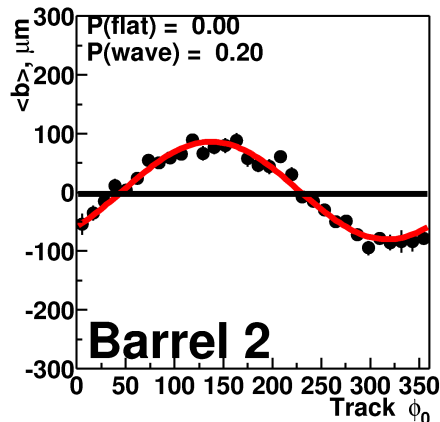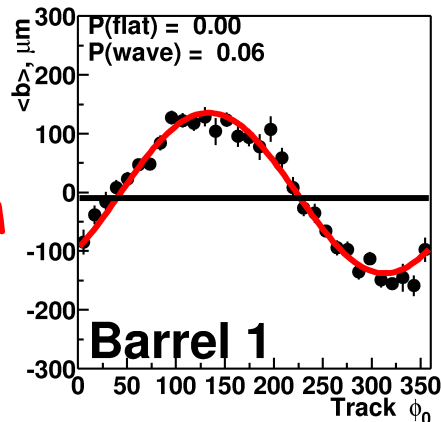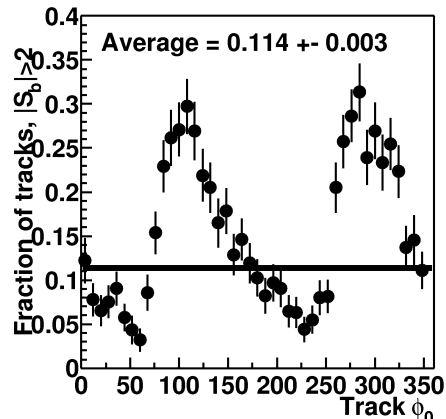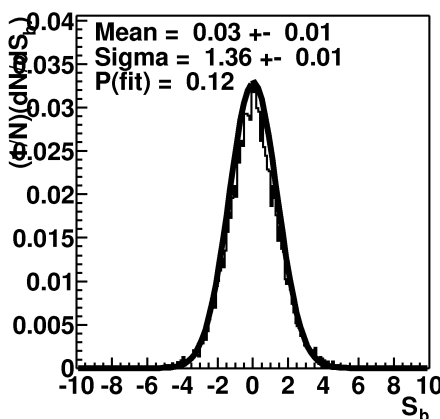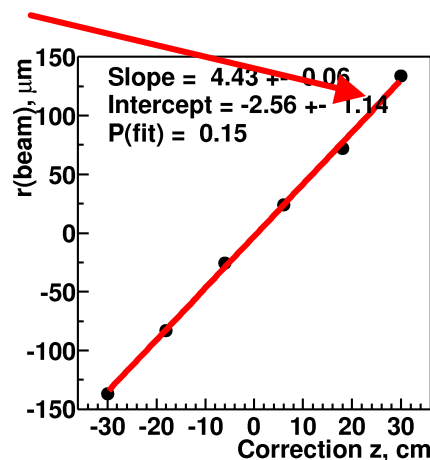 ϕ = random

find,

  m consistent w/0

  Slightly better b

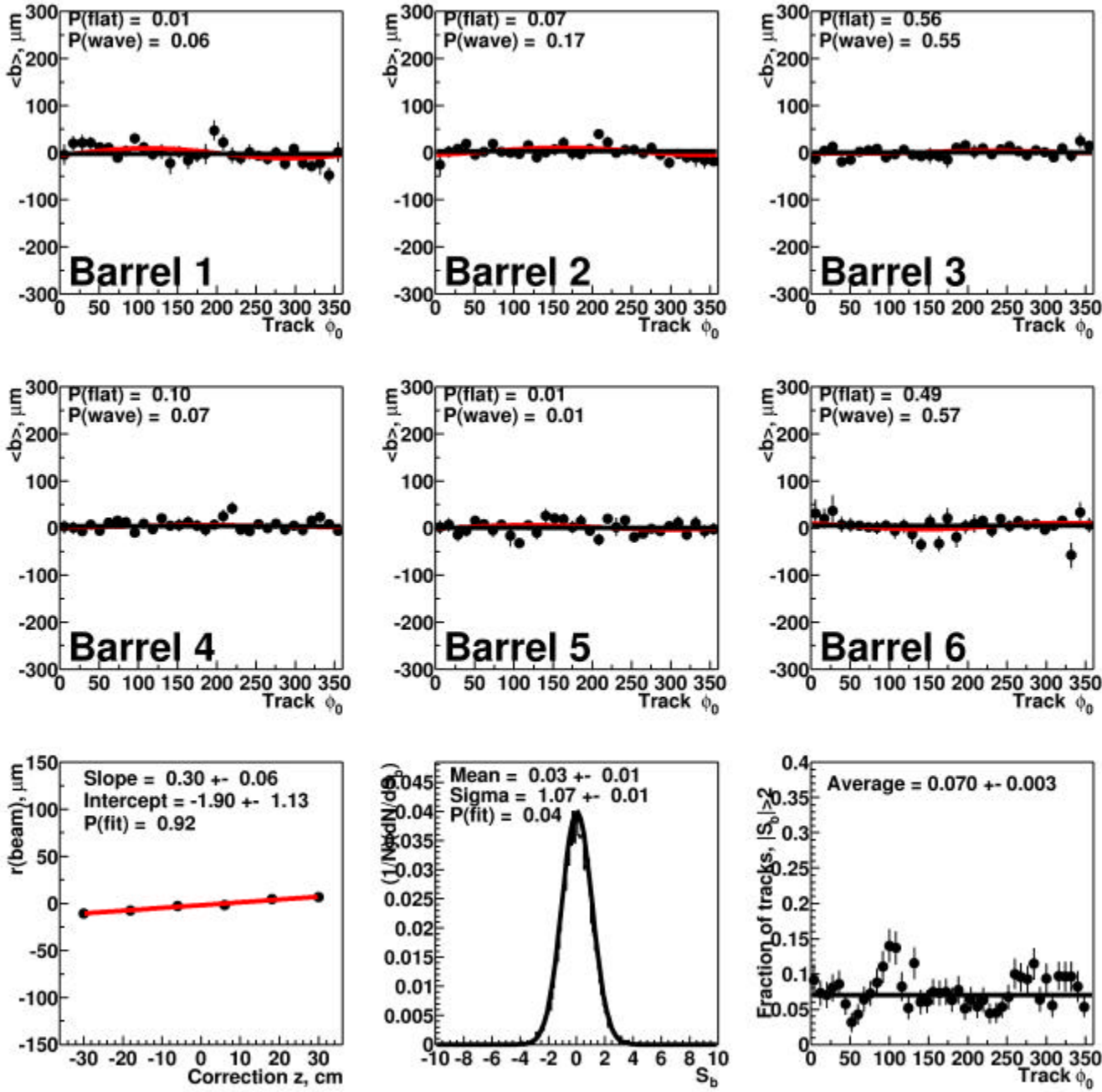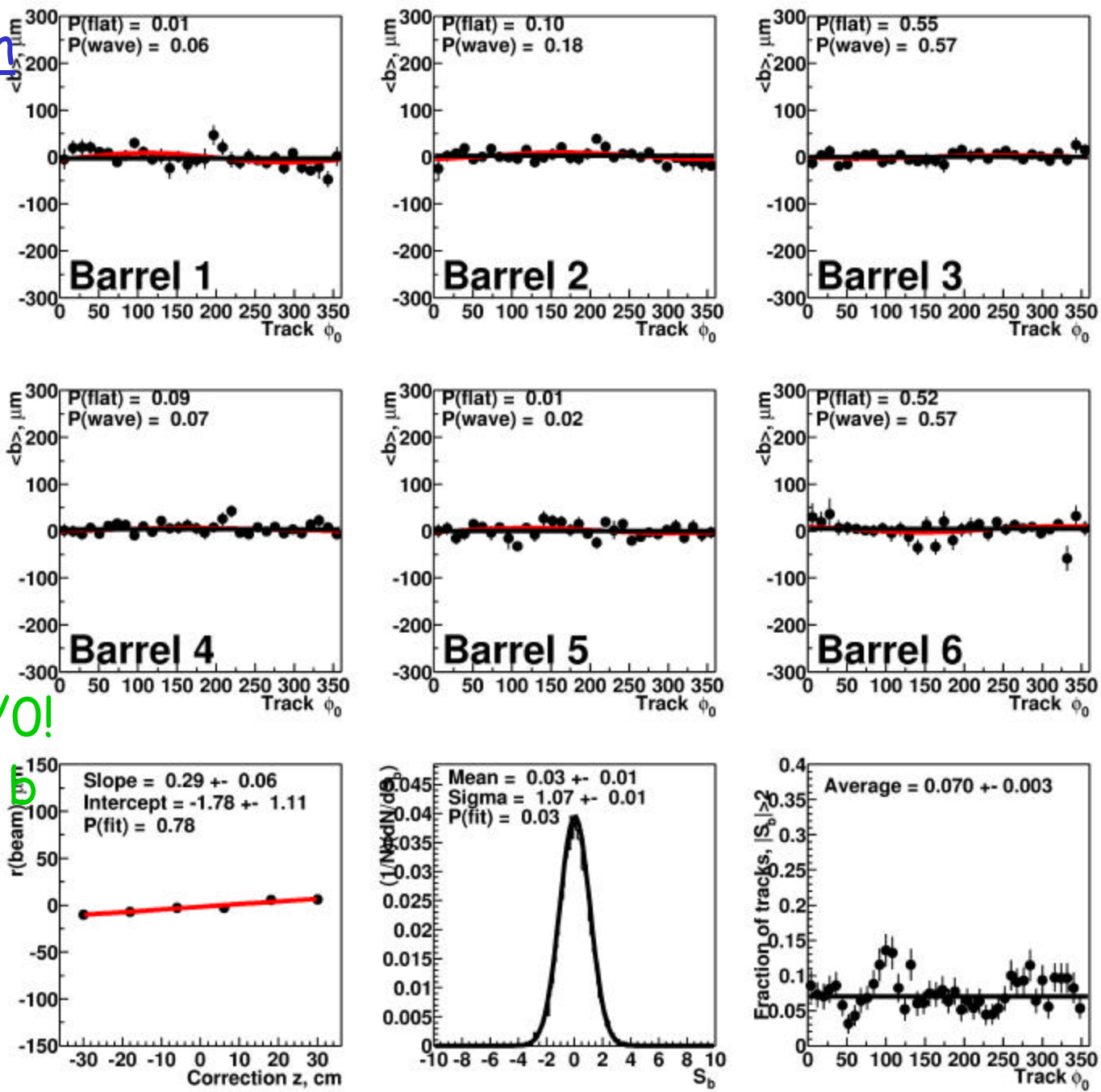## Tilt sample, again

after applying
  barrel+layer
  correction

expect
  $m_r = 0$ mm/cm
  ϕ = random

find,
  m consistent w/0!
  Slightly better b

02/07/03

Conclusions

- either correction method alone beats none
- negligible differences between the two methods
    - similar fit probabilities for flatness
    - identical impact parameter widths
- barrel-only slightly better
    - slightly less physics dependence
    - simpler

So stick with barrel only correction...